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Rebecca A. Baumann  
Signature: Rebecca A. Baumann

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**PATENT**

Attorney Docket No. NTI-849

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application ) PATENT APPLICATION  
Inventor(s): Linyong Pang )  
Application No.: 10/785,254 ) Art Unit: 2825  
Filed: 2/23/2004 ) Examiner: Sun J. Lin  
Title METHOD AND APPARATUS OF WAFER )  
PRINT SIMULATION USING HYBRID )  
MODEL WITH MASK OPTICAL IMAGES )

**INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed below or on an attached Form PTO-1449 is information known to applicant(s). A copy of each listed publication and non-U.S. patent, is being submitted herewith, along with a concise explanation of information in a foreign language, if any, pursuant to 37 C.F.R. §1.97-1.98.

Applicants respectfully request that the listed information be considered by the Examiner and be made of record in the above-identified application. If form PTO-1449 is enclosed, the Examiner is requested to initial and return it in accordance with MPEP § 609.

This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56.

This statement qualifies under 37 C.F.R. § 1.97, subsection (b) because (check all that apply):

(1) It is being filed within 3 months of the application filing date and is other than a continued prosecution application under § 1.53(d)  
-- OR --

(2) It is being filed within 3 months of entry of a national stage  
-- OR --

(3) It is being filed before the mail date of the first Office Action on the merits.  
-- OR --

(4) It is being filed before the mailing of a first Office Action after the filing of a request for continued examination under § 1.114

37 C.F.R. § 1.97(c). If this statement is being filed after the period specified in § 1.97(b), but before the mailing date of the earlier of a final office action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application, then:

a certification as specified in § 1.97(e) is provided below; or

a fee of \$180.00 as set forth in § 1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.

37 C.F.R. § 1.97(d). If this statement is being filed after the period specified in § 1.97(c), but on or before payment of the issue fee, then:

A. a certification as specified in § 1.97(e) is completed below; and

B. a fee of \$180.00 as set forth in § 1.17(p) is authorized below, enclosed, or included with the payment of other papers filed together with this statement.

*Fee Authorization.* The Commissioner is hereby authorized to charge any additional fees or credit any overpayment associated with this communication to Deposit Account No. 50-0574 (Docket No. NTI-849).

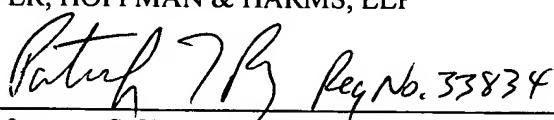
Respectfully submitted,

BEVER, HOFFMAN & HARMS, LLP

Dated:

10/12/04

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Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>		Application Number	10/785,254		
		Filing Date	2/23/2004		
		First Named Inventor:	Linyong Pang		
		Examiner: Sun J. Lin	GROUP: 2825		
Sheet	1	of	1	Attorney Docket Number	NTI-849

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cited No. <sup>1</sup>	Document Number Number - Kind Code <sup>2/3/known</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	A01	US-6,289,499	B1	09/2001	Rieger et al.
	A02	US-2002/0164065	A1	11/2002	Cai et al.
	A03	US-2002/0194576	A1	12/2002	Toyama

### FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Cntry Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> <sup>6/known</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Passages or Figures Appear	T <sup>6</sup>
	A04	WO 01/65317	A2	09/2001	Spence	

### OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Lu et al. "Application of Simulation Based Defect Printability Analysis for Mask Qualification Control," Proceedings of the SPIE, Vol. 5038, February 2003, pg. 33-40
	Pang et al. "Simulation-based Defect Printability Analysis on Alternating Phase Shifting Masks for 193 nm Lithography," Proceedings of the SPIE, Vol. 4889, October 2002, pg. 947-954
	Randall et al. "Variable Threshold Resist Models for Lithography Simulation," Proceedings of the SPIE, Vol. 3679, March 1999, pg. 176-182

EXAMINER SIGNATURE:

DATE CONSIDERED:

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2. \*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.